

APRIL 6, 2000 TEDDINGTON CIE-TC2-45 MEETING; SUMMARY OF RESULTS.

The rather short meeting centered around the two major problems: 1.) defining the new quantities for LED luminous/radiant flux evaluation in an integrating sphere and 2) finding a formula to estimate the detector-filter combination suitability for photometric measurements.

- 1.) Definition for LEDs partial flux:  $4\pi/x$ ;  $x$  could be any number  $>2$ ; if the solid angle is too small, this definition would merge with the "averaged LED intensity" definition. To hold these definitions simple, it was proposed that the solid angle for any partial flux measurement should start from the tip of the lens, along the geometrical axis of the LED. When partial flux is measured in the integrating sphere the LED should be inserted at the side-window such, that the radiation entering the sphere within the solid angle starting from the tip of the lens along the geometrical axis of the LED should correspond to the  $4\pi/x$  value.

For total flux measurement, the LED can be totally inserted inside the sphere, or from a side-window, if the backside radiation is not considered.

In the case when  $x=2$ , the hemispherical radiation measurement might be unanswered with the new definition; if it is important that none of the radiation coming from the backside of the chip should be included, but every part of the radiation going into the forward direction should be counted, the positioning of the LED cannot be defined easily for the many different types.

A) The main question here is: how important is the small error caused by insertion to the tip of the LED instead of to the position of the chip for certain applications or can this be neglected.

- 2.) Solution to this problem has to include the white LEDs, where similar function as  $f_1'$  might be suitable; or using an other weighting function instead of CIE "A" source, or not use any, just express the integrated errors for different wavelength regions.

These problems will have to be decided together with the members of TC2-46, since they have to introduce the same solution into their final report.

No new meeting has been scheduled . Please respond to let me know your opinion on these questions, so I could finalize our recommendations. (Third and hopefully last draft) If we need one more meeting, we can schedule one either late Fall this year or early next year. Please let me hear your opinion on this matter as well.

Final remark: Next mailings will be sent only to those members who indicate their interest and active participation in TC2-45, by responding promptly. Please Try!

Wishing you all a pleasant spring and summer (I hope we have more correspondence before Fall, so I have time to wish you a pleasant winter later)

Kathleen Muray